

REMARKS

The Examiner is thanked for the thorough examination of the application. It is believed that no new matter is added to the application by this Response.

Entry Of Response

Entry of this Amendment under 37 C.F.R. §1.116 is respectfully requested because it places the application in condition for allowance. Alternately, entry is requested as placing the application in better form for appeal.

Status Of The Claims

Upon entry of this Amendment, claims 1, 2 and 4-32 are pending in the Application. Claims 1, 11, 17, 18 and 19 are independent. Claims 1, 11, 17 and 18 have been amended to improve their language to better set forth the invention being claimed. The Amendments to claim 19 incorporate subject matter canceled from claim 24. Support for claims 28-32 can be found in paragraph 0027 of the specification.

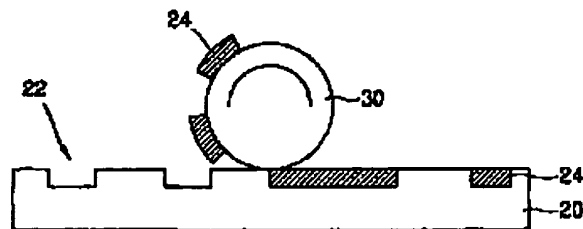
Rejection Under 35 U.S.C. §103(a) Over Jeong and Evans

Claims 1, 2 and 4-27 are rejected under 35 U.S.C. §103(a) as being unpatentable over Jeong (U.S. Patent 6,722,760) in view of Evans (U.S. Patent 6,001,515). Applicant traverses.

The present invention pertains to a method for forming a resist pattern that reduces misalignment, reduces material costs and increases productivity. Of the many embodiments of

the present invention, claim 1 is a typical novel combination of steps that includes providing a substrate on which multiple unit panels and etching object layers on the respective unit panel areas are formed; dividing the substrate into at least two areas; providing a cliché on which multiple grooves are formed; filling resist in the grooves; transferring the resist in the grooves on a blanket applied on a surface of a printing roll by contacting and rotating the printing roll with the blanket on the cliché corresponding to the divided area of the substrate; and applying the resist transferred on the surface of the blanket on the etching object layer. Independent claims 11, 17 18 and 19 also set forth embodiments of the invention that use a blanket. One of the advantages of the blanket is improved adhesion with the resist (*see* claims 28-32).

Jeong pertains to an ink printing cliché. At pages 2 and 3 of the Office Action, the Examiner points to Figures 2A through 2C of Jeong and the discussion at column 2, lines 54-60 of Jeong. Figure 2B of Jeong is reproduced below.

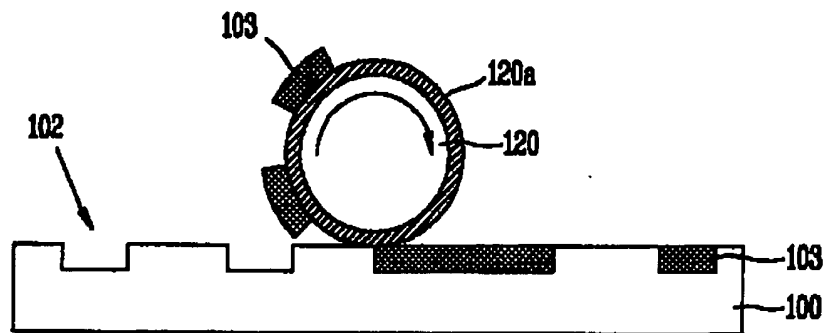


The passage at column 2, lines 54-60 of Jeong (relied upon by the Examiner) discusses Figure 2B:

The transfer roll 30 is formed with a circumference having the same length as that of the panel of a display device to be fabricated. That is, the transfer roll 30 has the circumferential length equal to the length of the desired panel. Accordingly, the ink 24 filled in the groove 22 of the cliché 20 can be wholly transferred on the surface of the circumference of the transfer roll 30 by a single rotation.

At page 2, lines 23-25 of the Office Action, the Examiner asserts that Jeong discloses “resist to be transferred (blanket).” However, as is clearly shown in Figure 2B of Jeong, no blanket is used.

In contrast, the blanket of the present invention is shown in Figure 4B of the instant application, which is reproduced below.



The technology of Figure 4B of the present invention is described in paragraph 0027 of the specification:

[0027] As shown in Figure 4B, the resist 103 filled in the groove 102 of the cliché 100 is transferred onto a surface of a printing roll 120 which contacts and rotates on the surface of the cliché 100. A blanket 120a is applied on the surface of the printing roll 120 for improving adhesive force with the resist 103 and to separate the resist 103 from the cliché 100 smoothly. In addition, the blanket 120a has the same width as that of the panel on the display device, and has a circumference similar to the length of the panel. Therefore, the resist 103 filled in the groove 101 of the cliché 100 can be completely transferred onto the circumferential surface of the printing roll 120.

That is, the blanket 120a is not identical with the resist 103, as is posited by the Examiner. The blanket 102a is used to improve adhesive force between the resist 103 and the printing roll 120 for smooth removal of the resist (*see* claims 28-32). On the other hand, if the

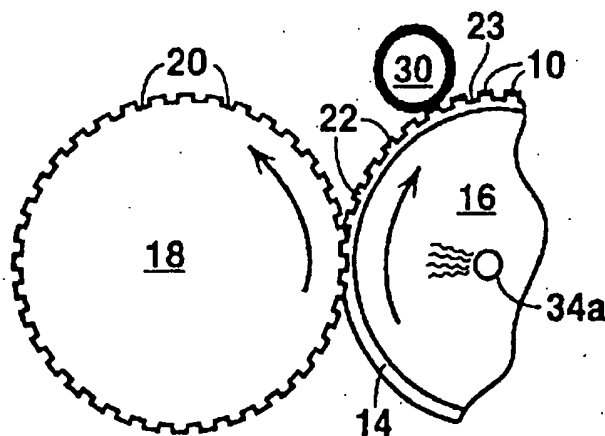
resist and the blanket were the same (as posited by the Examiner) there would be no change in the adhesive force.

Jeong therefore utterly fails to disclose or suggest a blanket or the advantages to be obtained from a blanket.

At page 3, lines 6-16 of the Office Action, the Examiner acknowledges some of the many failures of Jeong:

The difference between the claims and Jeong is that Jeong does not disclose that the resist in the grooves is formed on the blanket formed on the surface of the transfer roll (printing roll), and that the printing roll is rolled with the blanket *[sic]* on the cliché. Jeong does not disclose that the printing roll with the blanket *[sic]* with the resist material is rolled thereon the surface of the etching object layer (claim 21). Jeong does not disclose that the size and shape of the blanket (same circumference) is the same as that of the roll, and that the height of the blanket is the same as that of the printing roll (claim 23). Jeong does not disclose that the area of the blanket is less than an area of the etching object layer (claim 26). Jeong does not disclose that the area of the etching object layer is substantially a whole multiple of the area of the blanket (claim 27).

The Examiner then turns to Evans at column 5, lines 48-67, which describes Figure 2 of this reference. Figure 2 of Evans is reproduced below.



The functioning of the transfer layer 14 of Evans is described at column 5, lines 48-67 (relied upon by the Examiner):

FIG. 2 illustrates a method in accordance with the present invention, in which transfer layer 14 is applied to a collector roll, and then a raised pattern is formed on transfer layer 14. The raised pattern can be formed on transfer layer 14 using a variety of techniques. For example, in FIG. 2, transfer layer 14 is contacted by patterned intaglio roller 18 (with no ink thereon) while transfer layer 14 is in a deformable state. Patterned intaglio roller 18 has a recessed pattern 20 thereon corresponding to the desired black matrix pattern. As a result, patterned intaglio roller 18 contacts the deformable transfer layer 14 and forms raised pattern 22, which corresponds to the desired black matrix pattern 10. Transfer layer 14 will have to be hardened sufficiently to retain the embossing pattern obtained from roll 18. This can be accomplished by utilizing thermoplastic inks and cooling the transfer layer, at the point of contact with roll 18, to set the ink. Alternatively, and more preferably, radiation curable inks could be employed, and radiation emitted from ultraviolet light 34a through roll 16 to cure the transfer layer 14 during the embossing operation.

As a result, although the transfer layer 14 of Evans may be analogized to the resist 103 of the present invention (since they both are transferred), the transfer layer of Evans is clearly not a blanket that can promote adhesion.

Evans thus fails to address the deficiencies of Jeong in disclosing or suggesting a blanket.

Therefore, one of ordinary skill in the art would not be motivated by the combination of Jeong with Evans to produced a claimed embodiment of the invention set forth in independent claims 1, 11, 17, 18 and 19. A *prima facie* case of obviousness has thus not been made. Claims depending upon these independent claims are patentable for at least the above reasons. This rejection is overcome and withdrawal thereof is respectfully requested.

Application No. 10/736,709
Amendment dated September 1, 2006
After Final Office Action of June 1, 2006



Docket No.: 0630-1835P

Information Disclosure Statement

The Examiner is thanked for considering the Information Disclosure Statement filed December 17, 2003 and for making the initialed PTO-449 form of record in the application in the Office Action mailed June 30, 2005.

Foreign Priority

The Examiner has acknowledged foreign priority in the Office Action mailed June 30, 2005.

The Drawings

The Examiner is respectfully requested to indicate whether the drawing figures are acceptable in the next official action.

Conclusion

The Examiner's rejection has been overcome, obviated or rendered moot. No issues remain. It is believed that a full and complete response has been made to the outstanding Office Action. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert E. Goozner, Ph.D. (Reg. No. 42,593) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: September 1, 2006

Respectfully submitted,

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